

Notice of Allowability

Application No.

10/642,199

Examiner

Mohammed Hasan

Applicant(s)

WADA ET AL.

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/212004.
2. ☒ The allowed claim(s) is/are 1 - 54.
3. ☒ The drawings filed on 18 August 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/050,560.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

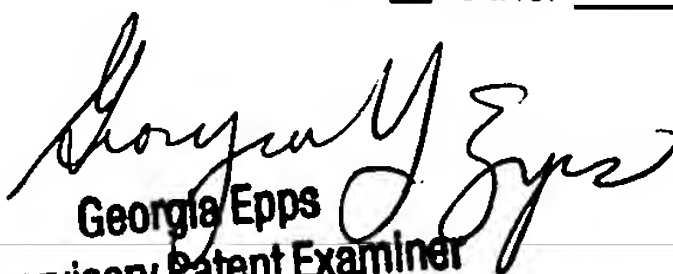
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800
Notice of Allowability

DETAILED ACTION

Allowable Subject Matter

1. Claims 1 – 54 are allowed.
2. The following is an examiner's statement of reasons for allowance: The prior art taken either singularly or in a combination fails to anticipate or fairly suggest the limitations of the independent claim, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. The prior art fails teach a combination of all the claimed features as presented in independent claims 1, 27 – 34, 43 – 46, 49, and 52, an objective lens for use in an optical pick up apparatus having two lenses from object side to the image side, second lens located opposite to the first lens and a flange section provided around the periphery of the optically functional section and the first and second lens are joined such a way two contacting section are brought in contact each other and the first lens has first surface , a second surface and the second lens has third and fourth surfaces, and first surface, second surface, third surface, and fourth surface in order from an object side to the image side and the first surface and the third surface are convex surface and the diameter of the second lens is smaller than the first lens and the fourth surface is a flat surface and the diameter of the optically functional section of a lens located closest to the image side is 40% or less of the outer diameter of the lens located closest to the image side (claims 1, 27, and 31) and the second lens located opposite to the first lens and a flange section provided around the periphery of the

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optically functional section and a concave portion made hollow toward the object side from a position where the fourth surface is located closest to the object is provided on the flange section provided around the periphery of the optically function section (claims 28); and the first contacting section has a first parallel to the optical axis and second contacting surface has a second parallel to surface to the optical axis and both parallel surface are brought in contact with each other so that relatively positioning in the direction perpendicular to the optical axis between the first lens and the second lens is determined (29, and 30); and second image side – flat surface is provided in a direction perpendicular to the optical axis at the image side on the flange section outer more than the optically functional section of the second lens (claim 32); and the first contacting section has a first slope surface slanted to the optical axis and the second contacting section has a second slope surface slanted to the optical axis and the first slope surface and the second slope surface are brought in contact with each other so that relatively positioning in the optical axis direction and in the direction perpendicular to the optical axis between the first lens and the second lens is determined (claim 33) ; and a gas flow passage to allow gas to flow between a space by the optically functional section of the first lens and the optically functional section of the second lens and outside of the object lens (claim 34) and the flange section of the first lens and the flange section of the second lens are applied with an adhesive and a portion on the fitted section is not applied with an adhesive (claim 43); and at least one of the first lens and the second lens has a water vapor transmission ratio $1 \text{ g} / \text{m}^2 \cdot 24 \text{ h}$ to $60 \text{ g} / \text{m}^2$ and first and the second lens has the coefficient of the water absorption of the adhesive is

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.01 % to 2 % (claims 44 and 45); and an intermediate holding member hold the both lens and the both lens and the intermediate holding member are constructed in a single body and the intermediate holding member and the optically functional section of the second lens, out side of the objective lens (claims 46); and the second lens is shifted relatively to the first lens in a direction to the perpendicular to the optical axis in a clearance on a fitted section between the first and second lens and a variance in wave front aberration on an image forming point is less than a value defined diffraction limiting function (claim 52) (note: claims 28, 30, 32, 33, 43 – 46, and 52 are allowed previous office action).

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The closest prior art

Kikuchi et al (US 2002 /003941 A1) discloses an objective lens, optical pickup device and optical recording and reproducing apparatus.

Kitamura et al (2002/0135891 A1) discloses an objective lens, coupling lens, light converging optical system, and optical pick-up apparatus.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

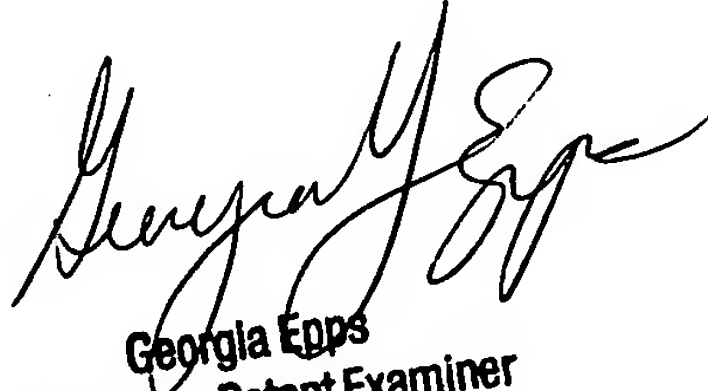
Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammed Hasan whose telephone number is (703) 306-0089. The examiner can normally be reached on M-TH, 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (703) 308-4883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 306-5515 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

MH
February 15, 2005


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800